

Syllabus, Ec717a: Contract Theory

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This is the first half of Ec717, focusing on mechanism design, contracts and applications to bargaining, auctions, and organization theory. There is a single textbook for the course:

Contract Theory, by Patrick Bolton and Mathias Dewatripoint (BD hereafter), MIT Press, 2005.

This part of the course will cover material from BD, Chapters 2-10 which will cover contract design for single and multiple agents. It will then describe applications to the theory of hierarchies and decentralization. The second half of the course will be taught by Sandeep Baliga, which will probably cover topics in implementation theory, incomplete contracts, property rights and theory of the firm (Chapters 10–13 of BD).

The course should be useful for anyone interested in learning theoretical tools employed in contemporary analyses of contracts or mechanisms in the presence of asymmetric information in industrial organization, public economics, health, trade, macro or development.

Grades will be based on problem sets and a final exam.

Sessions and Readings:

- 1. Single-Agent Adverse Selection (Sept 3,8):** BD, Ch. 2, esp. Sections 2.3.1 and 2.3.3
- 2. Single-Agent Moral Hazard (Sept 10,15):** BD, Ch. 4 (esp. Sections 4.2,4.4,4.5)
- 3. Multi-Agent Adverse Selection; Bargaining and Auctions (Sept. 17,22):** BD, Ch. 7 (esp. Sections 7.2, 7.3)
- 4. Multi-Agent Moral Hazard (Sept 24,29):** BD, Ch. 8 (esp. Sections 8.1, 8.2. 8.3)

J. Tirole, ‘Hierarchies and Bureaucracies: On the Role of Collusion in Organizations,’ *Journal of Law, Economics and Organization*, 1986, 2, 181–214.

- 5. Contract Dynamics (Oct. 1,6):** BD, Ch. 9 (esp. Sec 9.1, 9.2), Ch. 10 (Sec 10.1)

- 6. Hierarchies and Decentralization (Oct 8, 15, 20, 22):**

The material for this section of the course is surveyed in

D. Mookherjee, ‘Incentives in Hierarchies,’ *Handbook of Organizational Economics*, forthcoming (will be available at <http://people.bu.edu/dilipm/wkpap/index.html>).

Papers covered will include:

Williamson O. (1967), “Hierarchical Control and Optimal Firm Size,” *Journal of Political Economy*, 123-138.

Calvo, G. and S. Wellisz (1978) “Supervision, Loss of Control and the Optimal Size of the Firm” *Journal of Political Economy*, vol. 86, 943-952.

Melumad N., D. Mookherjee and S. Reichelstein, ‘Hierarchical Decentralization of Incentive Contracts,’ *Rand Journal of Economics*, Winter 1995, 26, 654-672.

Laffont J.J. and D. Martimort, "Collusion and Delegation," *Rand Journal of Economics*, 29, 280-305.

Mookherjee D. and M. Tsumagari, 'The Organization of Supplier Networks: Effects of Delegation and Intermediation,' *Econometrica*, July 2004, 72(4), 1179-1220.

Poitevin M., "Can The Theory of Incentives Explain Decentralization?" *Canadian Journal of Economics* November 2000, 33(4), 878-906.

Maskin E., Y. Qian and C. Xu, "Incentives, Information and Organizational Form," *Review of Economic Studies* 2000, 67, 359-378.